CLAIMS

1-10. (Cancelled).

11. (Currently Amended) A system for applying a load and measuring an internal angle of gyration in a mold adapted for use in a gyratory compactor, the mold having a wall and first and second mold plates which fit within the mold, the system comprising:

an internal gyration angle measurement device which fits within the mold and in planar contact with a first mold plate which fits within the mold, the internal angle measurement device having at least one probe which contacts the mold wall;

a second mold plate in planar contact with the internal gyration angle measurement device on a side of the internal gyration angle measurement device opposite to the first mold plate, and

a loading device within the mold and in contact with the second mold plate.

12. (Original) The system of claim 11 wherein the loading device contacts the second mold plate at one point, and contacts a third mold plate opposite to the second mold plate at one point.

13. (Original) The system of claim 11 wherein the first mold plate is positioned at or near a bottom of the mold, the second mold plate is positioned between the internal gyration angle measurement device and the loading device.

14. (Original) The system of claim 11 wherein the loading device is positioned above the internal gyration angle measurement device within the mold.

15. (Original) The system of claim 11 wherein the internal gyration angle measurement device is positioned above the loading device within the mold.

16. (Original) The system of claim 11 wherein the loading device is in single point contact with two mold plates in the mold, and the internal gyration angle measurement device is in planar contact with a mold plate.

17. (Previously Amended) A system for applying a load and measuring an internal angle of gyration in a mold used in a gyratory compactor, the system comprising:

an internal gyration angle measurement device which fits within the mold and which contacts a wall of the mold;

a loading device which fits within the mold, the loading device having a first protrusion which applies force to the internal gyration angle measurement device.

18. (Original) The system of claim 17 wherein the loading device is positioned on top of the internal gyration angle measurement device within the mold.

19. (Original) The system of claim 17 wherein the loading device is positioned underneath the internal gyration angle measurement device within the mold.

20. (Original) The system of claim 17 wherein the loading device has a second protrusion which is contacted by a compaction ram which is inserted into the mold.

21. (Original) The system of claim 17 wherein the loading device has a second protrusion which contacts a mold plate within the mold.

22. (Original) The system of claim 17 wherein the internal gyration angle measurement device is contacted by a compaction ram which is inserted into the mold.

23-26. (Cancelled).